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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DUONG, DIEU HIEN

ART UNIT

PAPER NUMBER

2821

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,817	<b>Applicant(s)</b> HOFFMEISTER ET AL.	
	<b>Examiner</b> DIEU HIEN T. DUONG	<b>Art Unit</b> 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11,12,14,15 and 18-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-12, 14-15 and 18-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is a response to applicant's amendment filed 03/06/2009. In virtue of this amendment, claims 1-10, 13 and 16-17 are canceled; claims 27-28 are newly added; thus, claims 11-12, 14-15 and 18-28 are currently in the instant application.

### ***Claim Objections***

2. Claim 21 is objected to because of the following informalities:

Claim 21, lines 5-7, the recitation "at least one of a length and a position of the decoupling element is arranged so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the decoupling element" is redundant since it is already recited in lines 6-8 of claim 1.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 11-12, 14-15 and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Asakawa (JP 2002-084119 A of record).

Regarding claim 11, Asakawa discloses, in Figure 1 and abstract, a window-integrated antenna for a vehicle, comprising

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a heating conductor field (2), which is provided for FM reception and LMS reception (see solution of abstract, lines 1-3); and

at least one decoupling element (24, solution of abstract, lines 7-10) for the FM reception which has a high-frequency, low-resistance, and non-galvanic connection to the heating conductor field;

wherein at least one of a length and a position of the at least one decoupling element is arranged so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the at least one decoupling element (decoupling element 24 having a length and a position).

Regarding claim 12, as applied to claim 11, Asakawa discloses, in Figure 1, wherein the decoupling element (24) for the FM reception includes at least one conductor situated essentially parallel to at least one boundary of the heating conductor field (2) which is not formed by a busbar (3, 4) for the heating conductor field.

Regarding claim 14, as applied to claim 11, Asakawa discloses, in Figures 3 and 5, wherein antenna conductors (5, 62, in Figure 3; 62, 129, 132 in Figure 5) are situated in the heating conductor field (2) essentially perpendicularly to heating conductors of the heating conductor field and are galvanically linked to the heating conductors.

Regarding claim 15, as applied to claim 14, Asakawa discloses, in Figures 3 and 5, wherein at least one of a length and a position of the antenna conductors ((5, 62, in Figure 3; 62, 129, 132 in Figure 5)) is arranged so that a resonance behavior of the window-integrated antenna occurs at a connection end of the decoupling element in the FM range.

Regarding claim 21, as applied to claim 11, Asakawa discloses, in Figure 1, wherein the decoupling element (24) for the FM reception includes at least one conductor (24) situated essentially parallel to at least one boundary of the heating conductor field which is not formed by a busbar (3, 4) for the heating conductor field, and at least one of a length and a position of the decoupling element (24) is arranged so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the decoupling element.

Regarding claim 22, as applied to claim 21, Asakawa discloses, in Figure 5, wherein antenna conductors (129, 132, and 62) are situated in the heating conductor field essentially perpendicularly to heating conductors of the heating conductor field and are galvanically linked to the heating conductors.

Regarding claim 23, as applied to claim 22, Asakawa discloses, in Figure 5, wherein at least one of a length and a position of the antenna conductors (129, 132 and 62) is arranged so that a resonance behavior of the window- integrated antenna occurs at a connection end of the decoupling element in the FM range.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 18-19 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa (JP 2002-084119A, see translation) in view of Oka (US 2004/0056810 A1, of record).

Regarding claims 18 and 24, as applied to claim 11, Asakawa discloses, in Figure 1, wherein the at least one decoupling element for the FM reception and further decoupling elements for other frequency ranges.

Asakawa does not disclose the decoupling elements are connected to a diversity switching device.

Oka discloses, in Figure 1 and par. [0050], the decoupling elements are connected to a diversity switching device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the diversity switching device of Oka in the antenna device of Asakawa to achieve the claimed invention, doing so would switch between waves (see par. [0050]).

Regarding claim 19 and 25, Asakawa/Oka disclose, (Oka, Figure 1), wherein a plurality of decoupling elements including the decoupling element for the LMS reception are connected to a shared module carrier.

7. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa (JP 2002-084119 A) in view of Endo (US 6,201,506 B1 of record).

Regarding claims 20 and 26, Asakawa/Oka disclose every feature of claimed invention except for a filter element being provided in a heating current circuit.

Endo discloses, in Figure 1, a filter element (12) being provided in a heating current circuit.

It would have been obvious to one having ordinary skill in the art as the time the invention was made to include the filter circuit being provided in the heating current circuit of Endo in the window-integrated antenna of Asakawa to achieve the claimed invention, doing so would reduce the high frequency noise (col. 3, lines 36-42).

8. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa (JP 2002-084119 A of record) in view of Oka and further in view of Endo.

Regarding claim 27, Asakawa discloses, in Figure 5, wherein antenna conductors (62, 129, 132) are situated in the heating conductor field (2) essentially perpendicularly to heating conductors (2) of the heating conductor field and are galvanically linked to the heating conductors, wherein at least one of a length and a position of the antenna conductors (62, 129, 132) is arranged so that a resonance behavior of the window-integrated antenna occurs at a connection end of the decoupling element (135) in the FM range, wherein the at least one decoupling element for the FM reception and further decoupling elements (16, 17, 20-21) for other frequency ranges.

Asakawa does not disclose that the coupling elements are connected to a diversity switching device.

Oka discloses, in Figure 1 and par. [0050], the decoupling elements are connected to a diversity switching device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the diversity switching device of Oka in the antenna device of Asakawa to achieve the claimed invention, doing so would switch between waves (see par. [0050]).

Asakawa/Oka do not disclose wherein a filter element is provided in a heating current circuit.

Endo discloses, in Figure 1, a filter element (12) being provided in a heating current circuit.

It would have been obvious to one having ordinary skill in the art as the time the invention was made to include the filter circuit being provided in the heating current circuit of Endo in the window-integrated antenna of Asakawa/Oka to achieve the claimed invention, doing so would reduce the high frequency noise (col. 3, lines 36-42).

Regarding claim 28, as applied to claim 21, Asakawa/Oka/Endo disclose, (), wherein antenna conductors (Asakawa, 62, 129, 132 in Figure 5) are situated in the heating conductor field (2) essentially perpendicularly to heating conductors of the heating conductor field and are galvanically linked to the heating conductors, wherein at least one of a length and a position of the antenna conductors (Asakawa, 62, 129, 132 in Figure 5) is arranged so that a resonance behavior of the window-integrated antenna occurs at a connection end of the decoupling element in the FM range, wherein a plurality of decoupling elements (51, 52, 6) including the decoupling element for the LMS reception are connected to a shared module carrier (Oka, 7 in Figure 1), and wherein a filter element is provided in a heating current circuit (Endo, 12, in Figure 1).



***Response to Arguments***

9. Applicant's arguments filed 03/06/2009 have been fully considered but they are not persuasive.

Regarding claim 11, applicant argues that Asakawa does not disclose that “at least one of a length and a position of the at least one decoupling element is arranged so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the at least one decoupling element”.

Examiner respectfully disagrees. Asakawa clearly discloses, in Figure 1, wherein at least one of a length and a position of the decoupling element (decoupling element 24 having a length and position) is arranged so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the at least one decoupling element”. The phrase “so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the at least one decoupling element” is not a structural limitation. Since the structure of Asakawa is exactly the same structure of claimed invention, it capable of performing the same function as claimed by applicant which is so that a resonant impedance behavior occurs in the FM frequency range at a connection end of the at least one decoupling element. In order to be given patentable weigh, a functional recitation must be expressed as a “means” for performing the specified function, as set forth 35 U.S.C 112 6<sup>th</sup> paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 O.G. 279.

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10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Inquiry***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DIEU HIEN T. DUONG** whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Trinh Vo Dinh/

Primary Examiner, Art Unit 2821